

ABSTRACT OF THE DISCLOSURE

PARITY EXCHANGE

A switch of a network for switching data. The switch includes a fabric for switching the data. The switch includes a parity fabric. The switch includes a connection mechanism connected to the fabric for providing data to and from the fabric and connected to the parity fabric for providing parity data to and from the parity fabric. The switch includes a first port card which receives data at a first rate from the network or sends data at the first rate to the network, performs first parity calculations on the data received at the first port card, produces first parity data from the first parity calculations or sends data at the first rate to the network. The first port card is connected to the connection mechanism to send data to or receive the data from the fabric at a connection rate and to send the first parity data to or receive the data from the parity fabric at the connection rate. The switch includes a second port card which receives data at a second rate from the network or sends data at the second rate to the network performs second parity calculations on the data received at the second port card, produces second parity data from the second parity calculations or sends data at the second rate to the network. The second port card is connected to the connection mechanism to send data to or receive the data from the fabric at the connection rate and to send the second parity data to or receive the data from the parity fabric at the connection rate. The second port card separating the data received at the second rate into streams of data that together equal the data received at the second port card that are sent concurrently at the connection rate to the fabric and combine the data streams

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